

Cherry on top

project



Scott Woyka is a fifth-generation woodworker. Although he trained as an aeronautic engineer, he could not resist returning to work with wood. He has been running a workshop for four years in the harbour town of Falmouth in Cornwall and produces furniture to commission, mostly to his own designs.



PHOTOGRAPHS BY BOB BRAY

With this linen chest, **Scott Woyka** weds bleached American hard maple to English cherry

Traditional fielded panels with a more modern accent

I had put in a great deal of work organising the *Out on a Limb* show, so I was glad to receive quite a few commissions afterwards. This was one of them. I got the impression that the customer, Aglaia, hadn't been looking for a particular piece of furniture but had so enjoyed the show, she wanted to own a piece. She admired an image of the original, made in silver maple and London plane, but chose in the end to have bleached American hard maple and English cherry. This would be the fifth version for me and, while I might have thought of it as a chore to be repeating the design, it was actually refreshing to be doing a design I was happy with in different woods.

The chest is essentially frame and panel construction. The two end-frames are morticed into the legs while the front and back frames use a curved housing

joint or a tongue into the legs. The lid is a simple mitred and biscuit frame with an inset panel.

The timber had all been prepared a couple of months prior to making, and left back at home for its final seasoning.

Frames in maple

I began with the frames in hard maple. These are all mortice and tenoned together with 8mm ($\frac{5}{16}$ in) mortices done on the morticer. I cut the tenons on the bandsaw. The grooves for the panels are then done on the router table. These are done at a depth so that the face of the panels will sit back from the frames by a little less than a tad (but more than a smidgen!). This will help to keep the frames from being marked later when the frames are on the router trammel table. Mortices are also cut for a bearer to support the chest bottom. I cut out the

hinge recesses at this point in the top member of the back frame, as it is much easier at this stage. The tenons on the side frames, which will be going into mortices in the legs, are cut at this point but the shoulders are not trimmed until after the glue-up in case of any discrepancy.

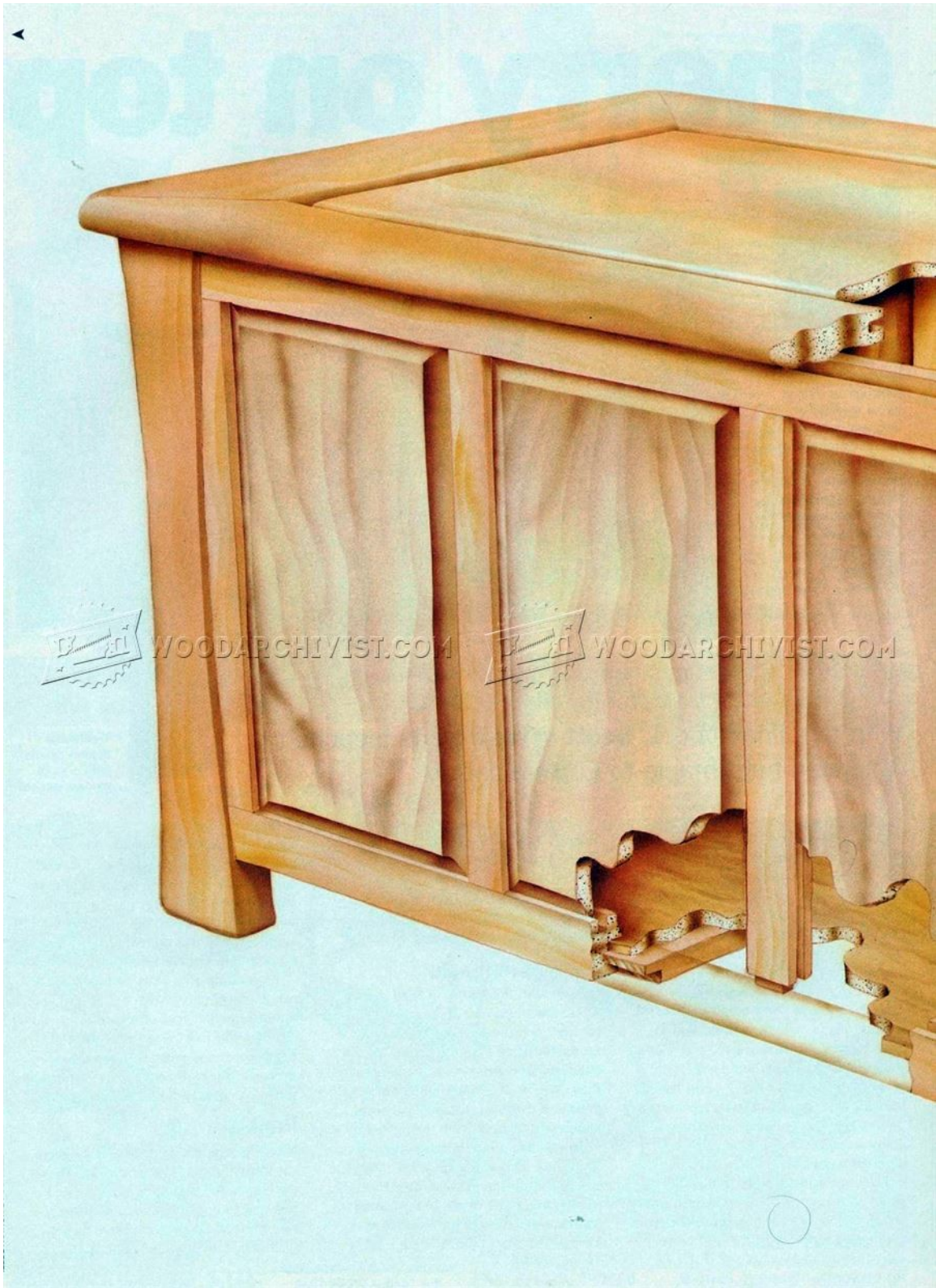
With all the joints cut I scraped and sanded these parts down to 180-grit and applied the first coat of bleach.

When this had dried I gave them a second coat and when this had dried I neutralised it with water. I then sanded all the parts again as the grain was raised.

Panels

Next I machined the panels. These were cut from 25mm (1in) cherry, deep-cut on the bandsaw. I planed and thickened it first and as it is quite twisty stuff every care must be taken to conserve the thickness. I used bookmatched pairs at



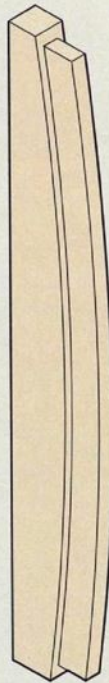




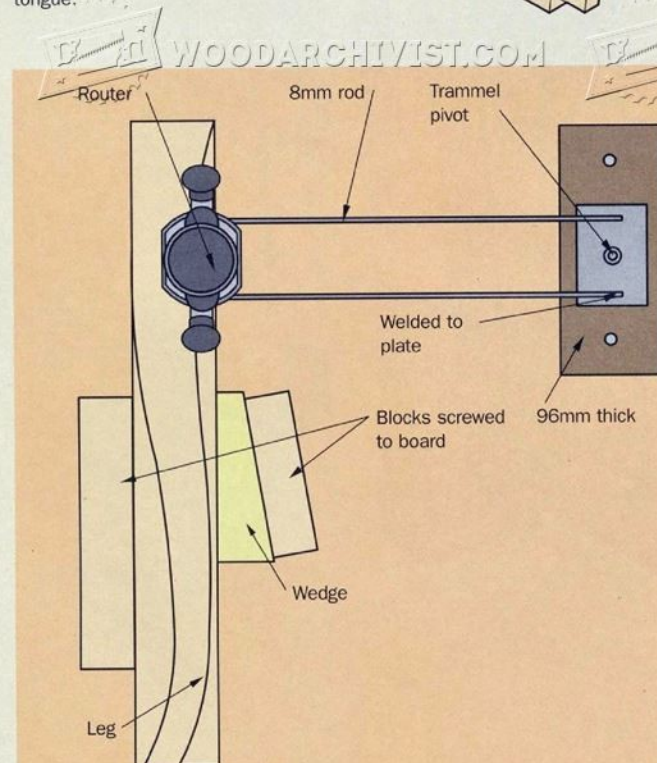
Router trammel

The curved tongue on the front and back frames was then cut on my router trammel board. The board itself is a sheet of 18mm ($\frac{3}{4}$ in) MDF. Lengths of wood the same thickness as the frames are screwed to the board in appropriate positions to hold the frames. The frames are then held in place face down with wedges. The centre of the radius is marked on the board and a block of wood screwed down here with an 8mm ($\frac{5}{16}$ in) hole at the centre about which the trammel can pivot. A straight cutter was used to machine the tongue in three easy steps. I made the tongue approximately half the thickness of the frames but was not too exact with this, as I would measure them afterwards and cut the groove in the legs to suit. The shoulders were cut roughly with a handsaw and carefully pared with a wide chisel following the curve of the tongue.

Curved tongue on the frames



DRAWINGS BY SIMON RICHWAY



Scott's trammel used for the legs on his writing desk article in *F&C* 32



Mitred lid frame



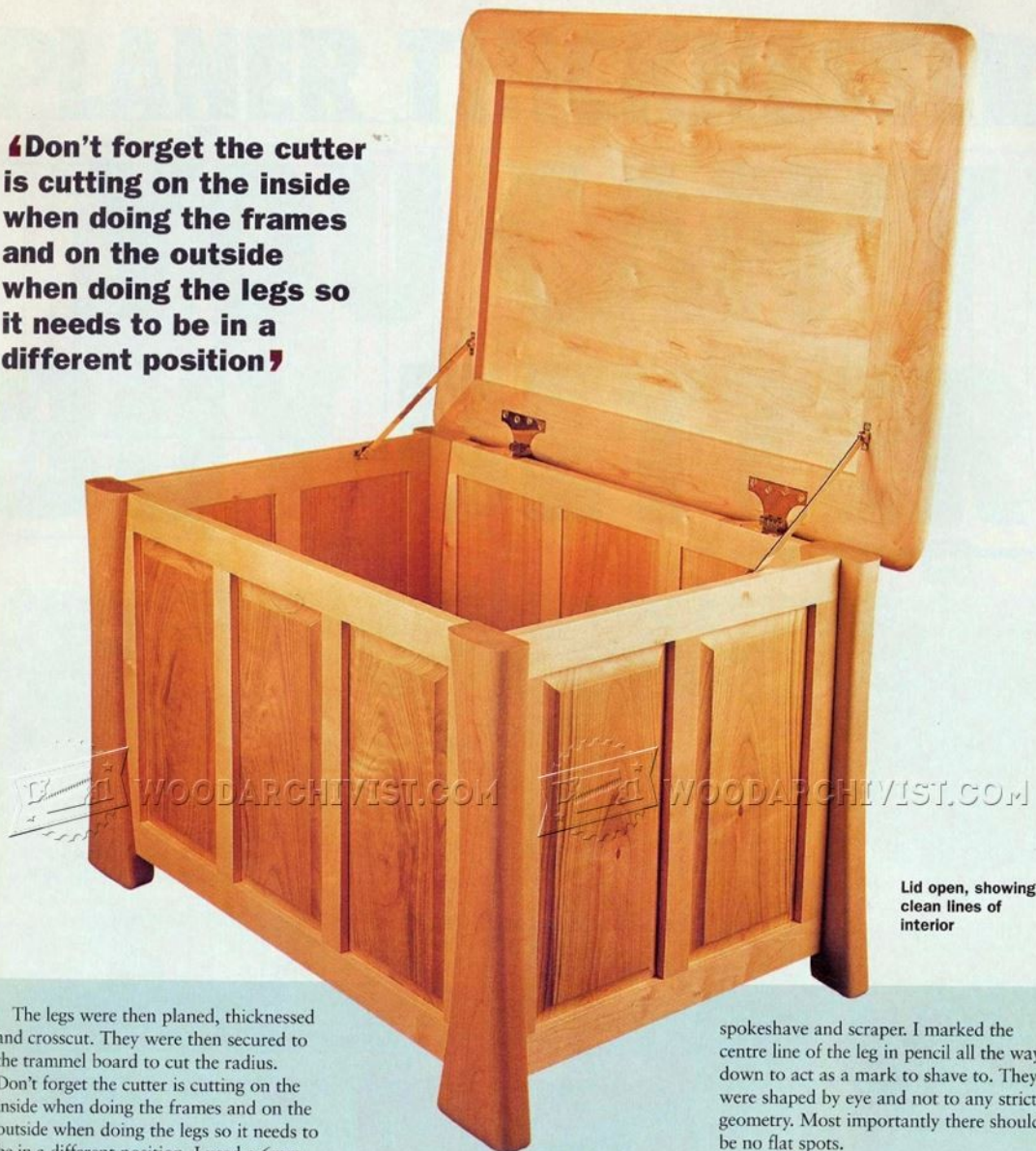
Lid panel detail, showing the chamfers

either end of the chest and for the front and back I used a bookmatched pair for the left and right panels and an odd one for the centre panel. With the panels planed and thickened to 16mm ($\frac{5}{8}$ in), I cut them to length and then shot the ends to give a smooth surface for the bearing to run on. The panels were then moulded on the router table with a large radius panel cutter.

I sanded the panels down to 240-grit, as the cherry needs to go that little bit finer. I don't like doing any more sanding than I need to so it seems crazy to go any finer than this. The frames were then glued up with the panels. Once removed from the clamps the joints are cleaned up and given another coat of bleach on the faces of the frames only. Again this had to be neutralised, dried and rubbed down.

The tenon shoulders were then trimmed on the end frames and the outside edge of the frame where it meets the leg was given a slight round-over, perhaps 2mm ($\frac{1}{8}$ in), with a hand-plane.

‘Don’t forget the cutter is cutting on the inside when doing the frames and on the outside when doing the legs so it needs to be in a different position’



Lid open, showing clean lines of interior

The legs were then planed, thickened and crosscut. They were then secured to the trammel board to cut the radius. Don't forget the cutter is cutting on the inside when doing the frames and on the outside when doing the legs so it needs to be in a different position. I used a 6mm straight cutter to cut down to a depth of about 8mm ($\frac{5}{16}$ in), then removed the legs from the trammel board, cut off the waste on the bandsaw and trimmed up with a flush-trim cutter on the router table.

I cut the groove in the legs with the hand-held router and a grooving cutter, which is adjustable in steps of 0.1mm. I then cut the groove in the legs to receive the chest bottom while the outside edge of the legs is still square. This was a 10mm ($\frac{3}{8}$ in) groove. I only had an 8mm ($\frac{5}{16}$ in) cutter so I marked out carefully and clamped an engineer's square to the leg to act as a fence for the router. With an 8mm ($\frac{5}{16}$ in) groove cut I then moved it 2mm ($\frac{1}{8}$ in) to cut the rest. The mortices for the end frames were cut

25mm (1in) deep with a 13mm ($\frac{1}{2}$ in) radius router cutter.

The radius on the outside edge of the legs was then cut on the bandsaw and cleaned up with a spokeshave and scraper. On making previous chests I had the centre of this radius at the mid-height of the leg. This time I raised it a little so that the leg was wider at the bottom giving a slightly more stable appearance.

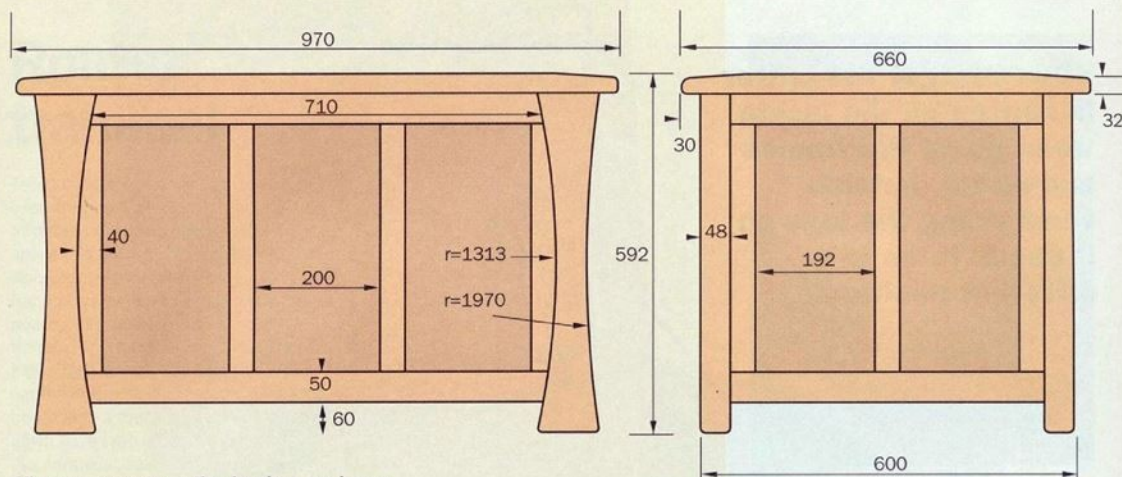
The edge of the leg, which will be inside the chest, was given a 3mm ($\frac{1}{8}$ in) round-over by hand. The other inside edge was given a 9mm ($\frac{3}{4}$ in) round-over on the router table, as were the bottom ends. The shaping of the front faces was started on the router table with a thumb mould cutter and then shaped with a

spokeshave and scraper. I marked the centre line of the leg in pencil all the way down to act as a mark to shave to. They were shaped by eye and not to any strict geometry. Most importantly there should be no flat spots.

Bleach the legs

The legs are given the same bleach treatment, and when ready can be glued to the front and back frames. There is the potential for a lot of air pressure to build up in this joint as the glue forms a seal. I drilled a hole in the edge of the tongue and one to meet it on the inside face of the tongue so that the air had some means of escape. Some careful clamping was required, as the surfaces are not parallel. I use some shallow wedges and pieces of cork floor tile to aid with this.

The bottom is made from 25mm (1in) cedar of Lebanon, deep cut on the bandsaw and thickened to 10mm. It was cut to length and cleaned up and I was then ready to assemble the chest. ➤



All measurements on the drawings are in mm

However I wanted to finish the inside faces of the chest first to avoid getting any finish on the cedar. I sprayed these with sanding sealer masking off the mortises. The glue-up was fairly straightforward, not forgetting to include the bearer for the bottom. Once out of the clamps all that was needed was to ensure the tops of the legs were flush with the frames.

Making the lid

The lid components were then machined to size. The frame was made from 100mm x 25mm (4in x 1in). I wanted to keep the mitres as small as possible, but the frame needed to be wide enough to take the stays on the inside. The mitres were done on the table-saw and cleaned up with my block plane. Biscuit joints were then cut with the hand-held router and 4mm ($\frac{1}{8}$ in) groover. These were in an appropriate position to allow for the shaping to come. Next I cut a 10mm ($\frac{3}{8}$ in) groove for the panel and put an 8 x 8mm ($\frac{5}{16}$ in) chamfer on the inside top edge, both on the router table.

Next came recessing the parliament hinges on the back section of the lid. I marked the position of the front edge and the each end of the hinges checking the distance between them with the hinge recesses already cut on the top of the back frame. The hinges are then put in place and I scribed round the curved section of the flap. I routed out the majority of the waste to 5mm ($\frac{1}{4}$ in) depth putting a fence on the router to do the front edge cleanly. I routed down to 7mm ($\frac{1}{2}$ in) at the back edge as the hinge flap tapers to this thickness ensuring that the flap would sit flush. I then paired between from the back to the front with a chisel.

To clean up the round section I chopped down with a flat chisel in small increments, checking occasionally with the hinge in place. Holes for the 12 x 25mm (1in) screws could then be drilled.

To shape the lid frame I pencilled an undulating line around the edge and on the top. With it dry-assembled I put it on the chest and marked round to ensure I didn't get carried away and take too much off. I also made sure that I didn't take off material where the hinge screws would come up. The shaping started with the draw-knife, then spokeshave, scrapers and sandpaper. I also left some flats on

the edges of each member to act as clamping surfaces.

The lid panel was made from 25mm (1in) maple deep cut on the bandsaw. Once made to size I put a rebate on the edge and then a 5 x 5mm ($\frac{3}{16}$ in) chamfer on the edge of the rebate. All the lid components then went through the bleaching palaver. They were then glued up with two sash clamps front to back and two across. Gentle squeezing was required and alignment was checked on the inside corners of the frame. The next day the flats could be shaped off, the joints cleaned up and a bit more bleach applied.

Hinges

The hinges were then put on temporarily, and with the chest on its back and the lid open, I marked the positions for the 200mm (8in) sliding stays. These were recessed into the lid and into the side frames. At this stage the hinge recesses on the chest required some jiggery-pokery to allow for the taper in the hinge flaps. This was done by chisel. The hinges came unpolished so I gave them a rub down to 400-grit to remove all the machining marks, then a buff with a polishing mop on my drill press.

The chest and lid were then given two spray coats of sanding sealer, rubbed down after each, and given a wax polish which I feel is adequate for bedroom furniture. I put all the fittings back on, put it back together and it was ready for delivery. The customer seemed to be delighted and gave me another order for a TV cabinet to match. She also showed me her Sam Maloof rocking chair from Hawaii, which was truly impressive.



Hinge and stay. Having good fittings is only half the job, they also need to look as good as the piece they are going on